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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/858,251	05/15/2001	Kemal Guler	10014416-1	3054

7590 03/13/2006
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80528-9599

EXAMINER

CHENCINSKI, SIEGFRIED E

ART UNIT	PAPER NUMBER
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3628

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/858,251

Applicant(s)

GULER ET AL.

Examiner

Siegfried E. Chencinski

Art Unit

3628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/31/2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 10 & 11 are rejected under 35 U.S.C. 103(a) as being disclosed by Lupien et al. (US 5,101,353, hereafter Lupien) in view of Phillips et al. (US 6,792,399 B1, hereafter Phillips).

Re. Claims 1 & 10, Lupien discloses a computer-implemented method and system for providing an automated auction analysis with the objective of seeking incremental profits from participation in auction markets (Abstract – ll. 1-2, 16-18, 23-25; Claim 12, l. 3), comprising:

- estimating unknown elements of market structure of the auction based on auction characteristics data extracted from historical auctions for similar items and a bidding model matching the extracted auction characteristics data (Abstract-ll. 16-18; Col. 3, ll. 19-22; Col. 9, ll. 61-67. Lupien reads on estimating unknown elements of market structure, in this case securities market structure for specific securities and groups of securities based on the auction characteristics data extracted from the historical stock market data. The historical stock market data is based on historical stock market auction data of the same and similar securities. An obviously underlying bidding model is used in the analysis and produces the estimates of market structure based on certain assumptions);
- predicting bidding behaviors of bidders in the auction based on the estimated unknown elements of market structure and characteristics of the auction (Col. 3, ll. 19-22, 28-37. Lupien obviously reads on the prediction of future bidding behavior of bidders in the auction using the above estimated unknown elements

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of market structure and characteristics of the auction, since prediction of bidding behavior in a market environment requires the use of assumptions and estimates of unknown variables of a future event such as an auction);

- employing an evaluation criterion to generate an evaluation of the auction based on (1) the estimated unknown elements of market structure and (2) the predicted bidding behavior of bidders (Col. 4, ll. 61-65. Lupien teaches that actions (to buy and sell through the bidding system in the auction based stock market) are taken after making appropriate decisions based on the evaluation process he labels as an analysis of transactions (in the market)).

Thus, the use of a bidding model(s) and the predicting of bidding behaviors obviously underlies Lupien's teaching. Lupien does not explicitly teach a bidding model and the explicit predicting of bidding behaviors, although the predicting of bidding behaviors obviously underlies the process leading to action decisions for participating in the auction process involved in securities markets. However, Phillips discloses a broad review of methodologies for predicting or forecasting bidding/trading behavior in market environments through various types of modeling, from the forecasting of the economy (Col. 3, l. 16 – Col. 6, l. 7) to the forecasting of the behavior of auction bidders for stocks and stock markets (Col. 11, l. 35 – Col. 12, l. 49, Col. 17, ll. 8-20; Col. 48, ll. 5-27; trading behavior – Col. 16, ll. 42-52), to the demand for specific products (Col. 6, ll. 8-17). Therefore, the ordinary practitioner of the art at the time of Applicant's invention would have found it obvious to modify the teachings of Lupien with the teachings of Phillips in order to provide a computer implemented method and system of automated auction analysis, motivated by a desire to improve techniques for forecasting the values of auction variables (Phillips, Col. 1, ll. 8-9).

Re. Claims 2 & 11, Lupien discloses a method and system comprising the step of generating a report from the evaluation of the auction (Col. 4, ll. 32-41; Col. 6, ll. 3-4, 7, 15-20, 33-37. Lupien teaches the production of a variety of reports deliverable in a plurality of media, including printing, electronic display, and transmission to the recipient's electronic storage medium.).

2. Claims 3-6 and 12-14 are rejected under 35 U.S.C. 103(a) as being disclosed by Lupien in view of Phillips as applied to claims 1 and 10, and further in view of Shoham (US Patent 6,285,989 B1).

Re. Claims 3, 4, 12 & 13, neither Lupien nor Phillips explicitly disclose a method and system comprising the steps of

- selecting the best auction design candidates from the evaluation of the auction;
and
- sending these best auction design candidates to an external auction implementation system to implement the auction.
- wherein the best auction design candidates are sent to the external auction implementation system via the Internet.

However, Shoham discloses a process of developing the best auction design candidates from the evaluation of the auction and sending these best auction design candidates to an external auction implementation system to implement the auction (Col. 4, ll. 37-45. Electronic networks including the internet present obviously numerous options for the mechanisms for making use of the best auction designs, including the external implementation options illustrated by Shoham, such as the internet). Therefore, the ordinary practitioner of the art at the time of Applicant's invention would have found it obvious to modify the teachings of Lupien and Phillips with the teachings of Shoham in order to provide a computer implemented method and system of automated auction analysis and the selection of the best auction candidates, motivated by a desire to provide a highly versatile toolkit with which to quickly define and deploy a wide range of online markets and to be able to modify rules on the fly without needing to engage in a lengthy software development process and service disruption (Shoham, Col. 4, ll. 29-34).

Re. Claims 5 & 14, Lupien discloses a method and system wherein the step of estimating the unknown elements of market structure of the auction further comprises accessing an external historical auction data repository for the auction characteristics data of the historical auctions for the items similar to the given item based on an user

input of the given item to be auctioned (External data collection is disclosed in Col. 3, ll. 7-14).

Neither Lupien nor Phillips explicitly disclose

- selecting, from an external bidding model repository, the bidding model matching the auction characteristics data;
- combining the extracted auction characteristics data and the bidding model to estimate the unknown elements of market structure of the auction.

However, as cited in the rejection of claims 3, 4, 12 & 13, Shoham discloses selecting the bidding model matching the auction characteristics data and combining the extracted auction characteristics data and the bidding model to estimate the unknown elements of market structure of the auction (Col. 4, ll. 41-54). Therefore, the ordinary practitioner of the art at the time of Applicant's invention would have found it obvious to modify the teachings of Lupien and Phillips with the teachings of Shoham in order to provide a computer implemented method and system of automated auction analysis and application of selecting the best auction candidates, motivated by a desire to provide a highly versatile toolkit with which to quickly define and deploy a wide range of online markets and to be able to modify rules on the fly without needing to engage in a lengthy software development process and service disruption (Shoham, Col. 4, ll. 29-34).

Re. Claim 6, Lupien discloses a system wherein the structure extractor further comprises

- a data selection module that accesses an external historical auction data repository for the auction characteristics data of the historical auctions for the items similar to the given item based on an user input of the given item to be auctioned (Col. 3, ll. 7-14);

Neither Lupien nor Phillips explicitly disclose

- a bidding model selection module that selects, from an external bidding model repository, the bidding model matching the auction characteristics data;

- a structure estimation module that combines the extracted auction characteristics data and the bidding model to estimate the unknown elements of market structure of the auction

However, Shoham discloses or suggests a process which selects a bidding model selection module and a structure estimation module that combines the extracted auction characteristics data and the bidding model to estimate the unknown elements of market structure of the auction (Col. 4, ll. 41-54. See claims 3, 4, 12 & 13).

The ordinary practitioner of the art at the time of Applicant's invention would have found it obvious to modify the teachings of Lupien and Phillips with the teachings of Shoham in order to provide a computer implemented method and system of automated auction analysis and application of selecting the best auction candidates, motivated by a desire to provide a highly versatile toolkit with which to quickly define and deploy a wide range of online markets and to be able to modify rules on the fly without needing to engage in a lengthy software development process and service disruption (Shoham, Col. 4, ll. 29-34).

3. Claims 8, 9 & 17 are rejected under 35 U.S.C. 103(a) as being disclosed by Lupien in view of Phillips as applied to claims 1 and 10 above, and further in view of Szabo (US Patent 6,868,525 B1).

Re. Claim 8, Lupien and Phillips disclose a system of predicting auction bidder behavior for matching the characteristics of an auction (See claims 1 and 10 above). Lupien and Phillips also disclose a behavior prediction module that predicts the bidding behaviors of bidders in the auction by applying the estimated unknown elements of market structure into the extracted bidding model matching the input of auction characteristics of the auction. Neither Lupien nor Phillips disclose a system using an external bidding model repository and user input regarding the characteristics of an auction. However, Szabo discloses the use of user inputs (Col. 5, ll. 38-41). An ordinary practitioner of the art at the time of Applicant's invention would have found it obvious to further modify the art of Lupien and Phillips with the disclosures of Szabo in order to provide a computer implemented method and system of automated auction analysis which includes user

inputs for selecting the best auction candidates by improved means of estimating unknown elements and ranking the evaluation for each of the candidate auction decisions, motivated by a desire to provide users with information which more accurately corresponds to the information sought (Szabo, Col. 3, ll. 42-45).

Re. Claims 9 & 17, Lupien and Phillips disclose the method and system step of employing an evaluation criterion to generate an evaluation of the auction to provide prediction for each of the candidate auction decisions using the evaluation criterion and based on (1) the estimated unknown elements and (2) the predicted bidding behavior of bidders (See claims 1 and 10 above). Phillips discloses the use of rankings of inputs and the ranking of results (Col. 6, ll. 35-37, 56-58). Neither Lupien nor Phillips explicitly disclose the use of user inputs. However, Szabo discloses the use of user inputs (Col. 5, ll. 38-41). An ordinary practitioner of the art at the time of Applicant's invention would have found it obvious to further modify the art of Lupien and Phillips with the disclosures of Szabo in order to provide a computer implemented method and system of automated auction analysis and application of selecting the best auction candidates by improved means of estimating unknown elements and ranking the evaluation for each of the candidate auction decisions, motivated by a desire to provide users with information which more accurately corresponds to the information sought (Szabo, Col. 3, ll. 42-45).

4. Claim 16 is rejected under 35 U.S.C. 103(a) as being disclosed by Lupien in view of Phillips as applied to claims 1 and 10 above, and further in view of Shoham and Szabo.

Re. Claim 16, Lupien and Phillips disclose a method and system of predicting bidding behaviors of bidders in an auction predicting the bidding behaviors of bidders in the auction by applying the estimated unknown elements of market structure into a bidding model (see claims 1 and 10). Neither Lupien nor Phillips explicitly disclose the use of bidding models obtained from an external repository and using user input of auction characteristics of the auction. However, Shoham discloses or suggests the use of bidding models obtained from an external repository (See claims 3, 4, 12 and 13 above). Further, Szabo discloses the participation of the user in the system by making inputs

(Col. 5, ll. 38-41). Therefore, the ordinary practitioner of the art at the time of Applicant's invention would have found it obvious to modify the teachings of Lupien, Phillips and with the disclosures of Shoham and Szabo in order to provide a computer implemented method and system of automated auction analysis and application of selecting the best auction candidates which also makes use of user inputs in the prediction of bidding behaviors of bidders in the auction process, motivated by a desire to provide users with information which more accurately corresponds to the information sought (Szabo, Col. 3, ll. 42-45).

5. Claims 7 & 15 are rejected under 35 U.S.C. 103(a) as being disclosed by Lupien, Phillips and Shoham as applied to claims 6 and 14 above, and further in view of Szabo, and Bajari and Hortacsu (Auction Models When Bidders Make Small Mistakes: Consequences for Theory and Estimation. August 15, 2001. Hereafter Bajari).

Re. Claims 7 & 15, Lupien discloses a system and method wherein the auction characteristics data are part of the auction mechanism data that also include bid data and a structure estimator, and estimating steps of a variety of data related to an evaluation for participating in an auction process (See Claims 1 & 10). Phillips discloses a method and system of estimating or predicting a value of a target variable based on the prediction of other variables called Interpolation Modeling (Col. 11, l. 34). Shoham discloses a method and system for selecting the most appropriate auction method (See claims 5 & 14).

None of Lupien, Phillips or Shoham disclose applying the bid data to the bidding model to invert the bidding model so as to express unobservable variables in the bidding model in terms of the observable bid data; and applying a statistical density estimation technique to the expression so as to obtain an estimate of the unknown elements.

However, Szabo discloses the use of statistical density estimation techniques in the analysis of online transactions, including commercial transactions such as auctions (Col. 25, l. 6, Col. 26, ll. 6-7; col. 27, ll. 15-18, 55-58; Col. 28, ll. 1-2, 60-62). Further, Bajari discloses the use of model inversion technique analysis of auction data (page 16, Estimation Procedure, lines 3-6, using a technique attributed to Bajari (1997)).

Therefore, the ordinary practitioner of the art at the time of Applicant's invention would have found it obvious to modify the art of Lupien, Phillips and Shoham with the teachings of Bajari and Szabo in order to provide a computer implemented method and system of automated auction analysis and application of selecting the best auction candidates by improved means of estimating unknown elements, motivated by a desire to provide improved tools for the analysis and design of auctions in real world application (Bajari, Abstract, lines 1-3).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Siegfried Chencinski whose telephone number is (571)272-6792. The Examiner can normally be reached Monday through Friday, 9am to 6pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Hyung S. Sough, can be reached on (571) 272-6799.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington D.C. 20231
or (571)273-8300 [Official communications; including After Final communications labeled "Box AF"]

}-6792 [Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

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Hand delivered responses should be brought to the address found on the above
USPTO web site in Alexandria, VA.

SEC

March 2, 2006


FRANTZY POINVIL
PRIMARY EXAMINER
